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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/368,354	08/05/1999	ROBERT R. BUCKLEY	103044	5438
7590	07/28/2004		EXAMINER	
OLIFF & BERRIDGE PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			POKRZYWA, JOSEPH R	
			ART UNIT	PAPER NUMBER
			2622	
			DATE MAILED: 07/28/2004	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/368,354	BUCKLEY ET AL.
Examiner	Art Unit	
Joseph R. Pokrzywa	2622	

— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 14 May 2004.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-22 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-22 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

- Certified copies of the priority documents have been received.
- Certified copies of the priority documents have been received in Application No. _____.
- Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5) Notice of Informal Patent Application (PTO-152)

6) Other: _____.

DETAILED ACTION***Response to Amendment***

1. Applicant's amendment was received on 5/14/04, and has been entered and made of record. Currently, **claims 1-22** are pending.

Response to Arguments

2. Applicant's arguments, see pages 6-9, filed 5/14/04, with respect to the rejection(s) of **claim(s) 1 and 10** under 35 U.S.C.103(a), as being unpatentable over Schiller *et al.* (U.S. Patent Number 6,049,339) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Vyncke *et al.* (U.S. Patent Number 5,926,185).

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. **Claims 1-19, 21, and 22** are rejected under 35 U.S.C. 102(e) as being anticipated by Vyncke *et al.* (U.S. Patent Number 5,926,185).

Regarding *claim 1*, Vyncke discloses a method of processing image data of a color image for marking (see abstract), the color image containing overmarked pixels where at least one first color is to be overmarked by a second color (column 2, line 55 through column 3, line 17, and column 4, lines 13 through 31, see Figs. 7a-8b), the method comprising generating information that designates the overmarked pixels (column 2, line 55 through column 3, line 17, and column 4, lines 13 through 31), performing raster image processing to create a raster image of the color image (column 1, lines 13 through 55, and column 10, lines 14 through 30), the raster image processing including overmarking processing that allows both the at least one first color and the second color to be separately included in the overmarked pixels in the same raster image (column 7, line 49 through column 8, line 57), and modifying image data of the overmarked pixels in the raster image to achieve undercolor reduction by reducing a value corresponding to a reduced amount of an underlying marking material (column 6, line 48 through column 8, line 57).

Regarding *claim 2*, Vyncke discloses the method discussed above in claim 1, and further teaches that the modifying the image data of the overmarked pixels comprises modifying image data corresponding to the at least one first color (column 4, lines 13 through 44, and column 5, line 23 through column 8, line 57).

Regarding *claim 3*, Vyncke discloses the method discussed above in claim 1, and further teaches of outputting the raster image, including the modified image data, to a marking driver (column 1, lines 13 through 55).

Regarding *claim 4*, Vyncke discloses the method discussed above in claim 1, and further teaches that the modifying image data of the overmarked pixels comprises

modifying a value of the image data corresponding to the at least one first color (column 4, lines 13 through 44, and column 5, line 23 through column 8, line 57).

Regarding *claim 5*, Vyncke discloses the method discussed above in claim 4, and further teaches that the modified value of the image data corresponding to the at least one first color results in a reduced amount of marking material corresponding to the at least one first color being applied to a marking substrate (column 6, line 48 through column 8, line 57).

Regarding *claim 6*, Vyncke discloses the method discussed above in claim 1, and further teaches that the generating information that designates the overmarked pixels comprises generating tags that correspond to the overmarked pixels (column 4, lines 13 through 59).

Regarding *claim 7*, Vyncke discloses the method discussed above in claim 6, and further teaches that the overmarked pixels correspond to a black image and the tags indicate that the overmarked pixels are black image pixels (column 4, lines 13 through 44, and column 7, line 49 through column 9, line 60).

Regarding *claim 8*, Vyncke discloses the method discussed above in claim 6, and further teaches that the overmarked pixels correspond to one of black text and a black stroke (column 7, line 49 through column 9, line 60), and the tags indicate that the overmarked pixels are one of black text pixels and black stroke pixels (column 7, line 49 through column 10, line 53).

Regarding *claim 9*, Vyncke discloses the method discussed above in claim 1, and further teaches that the generating information that designates the overmarked pixels comprises performing pattern recognition that recognizes specified patterns (column 2,

line 55 through column 3, line 17, and column 4, lines 13 through 44), and designating pixels that form the recognized patterns as the overmarked pixels (column 2, line 55 through column 3, line 17, and column 4, lines 13 through 44).

Regarding *claim 10*, Vyncke discloses a system that processes image data of a color image for marking (see abstract), the color image containing overmarked pixels where at least one first color is to be overmarked by a second color (column 2, line 55 through column 3, line 17, and column 4, lines 13 through 31, see Figs. 7a-8b), the system comprising an overmarked pixel designator that generates information that designates the overmarked pixels (column 2, line 55 through column 3, line 17, and column 4, lines 13 through 31), a raster image processor that creates a raster image of the color image (column 1, lines 13 through 55, and column 10, lines 14 through 30), the raster image processor provided with an overmarking processing function that allows both the at least one first color and the second color to be separately included in the overmarked pixels in the same raster image (column 7, line 49 through column 8, line 57), and an image data modification unit that modifies image data of the overmarked pixels in the raster image to achieve undercolor reduction by reducing a value corresponding to a reduced amount of an underlying marking material (column 6, line 48 through column 8, line 57).

Regarding *claim 11*, Vyncke discloses the system discussed above in claim 10, and further teaches that the modified image data is image data corresponding to the at least one first color (column 4, lines 13 through 44, and column 5, line 23 through column 8, line 57).

Regarding *claim 12*, Vyncke discloses the system discussed above in claim 10, and further teaches of a marking driver that performs marking according to the raster image, including the modified image data (column 1, lines 13 through 55).

Regarding *claim 13*, Vyncke discloses the system discussed above in claim 10, and further teaches that the image data modification unit modifies a value of the image data corresponding to the at least one first color (column 4, lines 13 through 44, and column 5, line 23 through column 8, line 57).

Regarding *claim 14*, Vyncke discloses the system discussed above in claim 13, and further teaches of a marking driver that performs marking according to the raster image that includes the modified image data (column 1, lines 13 through 55), wherein the marking driver marks a reduced amount of marking material corresponding to the at least one first color on a marking substrate based on the modified value of the image data corresponding to the at least one first color (column 6, line 48 through column 8, line 57).

Regarding *claim 15*, Vyncke discloses the system discussed above in claim 10, and further teaches that the overmarked pixel designator comprises a tag generator that generates tags that correspond to the overmarked pixels (column 4, lines 13 through 59).

Regarding *claim 16*, Vyncke discloses the system discussed above in claim 15, and further teaches that the overmarked pixels correspond to a black image and the tags indicate that the overmarked pixels are black image pixels (column 4, lines 13 through 44, and column 7, line 49 through column 9, line 60).

Regarding *claim 17*, Vyncke discloses the system discussed above in claim 15, and further teaches that the overmarked pixels correspond to one of black text and a black stroke (column 7, line 49 through column 9, line 60), and the tags indicate that the

overmarked pixels are one of black text pixels and black stroke pixels (column 7, line 49 through column 10, line 53).

Regarding *claim 18*, Vyncke discloses the system discussed above in claim 10, and further teaches that the overmarked pixel designator comprises a pattern recognition device that recognizes specified patterns (column 2, line 55 through column 3, line 17, and column 4, lines 13 through 44), and designates pixels that form the recognized patterns as the overmarked pixels (column 2, line 55 through column 3, line 17, and column 4, lines 13 through 44).

Regarding *claim 19*, Vyncke discloses a printer incorporating the system set forth in claim 10 (column 1, line 13 through column 2, line 52, and column 3, lines 56 through 67).

Regarding *claim 21*, Vyncke discloses a storage medium on which is stored a program that implements the method set forth in claim 1 (column 3, lines 56 through 67).

Regarding *claim 22*, Vyncke discloses a storage medium on which is stored data that has been processed according to the method set forth in claim 1 (column 3, line 56 through column 4, line 63).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. **Claim 20** is rejected under 35 U.S.C. 103(a) as being unpatentable over Vyncke *et al.* (U.S. Patent Number 5,926,185) in view of Miller *et al.* (U.S. Patent Number 5,731,823, cited in the Office action dated 4/27/04).

Regarding **claim 20**, Vyncke discloses a printing apparatus incorporating the system set forth in claim 10, but fails to expressly disclose if a digital copier incorporates the system.

Miller discloses a system that processes image data of a color image for marking (see abstract), the color image containing overmarked pixels where at least one first color is to be overmarked by a second color (column 6, lines 25 through 52), the system comprising an overmarked pixel designator that generates information that designates the overmarked pixels (column 3, lines 35 through 50, and column 6, line 25 through column 7, line 13), a raster image processor that creates a raster image of the color image (column 5, lines 33 through 43, and column 7, lines 14 through 21), and an image data modification unit that modifies image data of the overmarked pixels in the raster image (column 5, lines 44 through 67, and column 7, lines 21 through 64). Further, Miller teaches of a digital copier incorporating the system set forth above (column 11, line 45 through column 12, line 6).

Vyncke & Miller are combinable because they are from the same field of endeavor, being rasterizing page description signals to be output to a printing device.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the teachings of Miller having a digital copier incorporating the system, in the system of Vyncke.

The suggestion/motivation for doing so would have been that Vyncke's system would be able to be adapted to operate in a digital copier, thus being usable in more applications, as recognized by Miller, since both systems input PDL language data to be rasterized, wherein objects are identified by their attributes.

Therefore, it would have been obvious to combine the teachings of Miller with the system of Vyncke to obtain the invention as specified in claim 20.

Citation of Pertinent Prior Art

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Deutsch et al. (U.S. Patent Number 5,542,052) discloses a system that applies traps to a printed page specified in a PDL format; and

Kawakami et al. (U.S. Patent Number 5,767,886) discloses a system that reduces an error dispersion of overlapping color inks for each pixel.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joe Pokrzywa whose telephone number is (703) 305-0146. The examiner can normally be reached on Monday-Friday, 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward L. Coles can be reached on (703) 305-4712. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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